UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

ECOLOGICAL SITE DESCRIPTION

ECOLOGICAL SITE CHARACTERISTICS

Site Type: Rangeland

Site ID: R036XC106NM

Site Name: Bottomland

Precipitation or Climate Zone: 12 to 16 inches

Phase:

PHYSIOGRAPHIC FEATURES

Narrative:

This site occurs principally on the floodplains of large drainageways and is commonly subject to frequent overflow or flooding (normally more than once in two years). Slopes average less than 3 percent. Elevation range from about 5,000 to 6,500 feet above sea level.

Land Form:

1. Flood plain
2.
3.

Aspect:

1. N/A
2.
3.

	Minimum	Maximum
Elevation (feet)	5,000	6,500
Slope (percent)	0	3
Water Table Depth (inches)	N/A	N/A

Flooding:	**Minimum**	**Maximum**
Frequency	Rare	Occasional
Duration	Very brief	Very brief

Ponding:	**Minimum**	**Maximum**
Depth (inches)	N/A	N/A
Frequency	N/A	N/A
Duration	N/A	N/A

Runoff Class:

Negligible to medium.

CLIMATIC FEATURES

Narrative:

Average annual precipitation varies from about 12 inches to just over 16 inches. Substantial fluctuations from year to year are common, ranging from a low of about 6 inches to a high of over 30 inches. Approximately one-half of the annual precipitation comes in the form of rainfall during the months of July, August, and September, although wintertime precipitation in the form of snow, sleet, or rain is sometimes significant. Spring and late fall months are normally dry.

The average frost-free period ranges from about 165 to 190 days and extends from approximately the third or fourth week in April to mid October. Average annual air temperatures are about 56 degrees F. Summer maximums can exceed 100 degrees F and winter minimums on occasion go below zero. Monthly mean temperatures generally exceed 70 degrees F for the period of June through August.

Growing conditions favor warm-season perennial vegetation, although late winter and late summer precipitation is adequate to foster a significant cool-season component in the potential plant community. Occasional wet springs also create good conditions for annual forb production, but frequent winds from the west and southwest are common during this time of year and tend to deplete soil moisture at a critical time for the growth of these plants.

	Minimum	**Maximum**
Frost-free period (days):	69	221
Freeze-free period (days):	147	298
Mean annual precipitation (inches):	12	16

Monthly moisture (inches) and temperature (^{0}F) distribution:

	Precip. Min.	Precip. Max.	Temp. Min.	Temp. Max.
January	.37	1.22	16.2	55.6
February	.35	.94	18.6	60.1
March	.26	.95	22.1	66.1
April	.26	.42	27.0	74.2
May	.12	.58	34.0	82.6
June	.53	.98	42.8	92.0
July	2.29	3.32	52.5	92.6
August	2.50	3.22	51.4	89.9
September	1.62	2.85	43.5	85.7
October	1.17	1.81	32.0	76.2
November	.41	1.58	22.0	64.4
December	.61	1.85	15.9	55.9

Climate Stations:

				Period		
Station ID	299806	Location	Chloride Ranger Stn., NM	From: 05/14/49	To:	12/31/00
Station ID	291910	Location	Cliff 11SE, NM	From: 01/01/37	To:	12/31/00
Station ID	294009	Location	Hillsboro, NM	From: 10/01/24	To:	12/31/00
Station ID	297386	Location	Hood Ranger Stn., NM	From: 04/01/54	To:	12/31/00
Station ID	298324	Location	Silver City, NM	From: 01/01/61	To:	12/31/00

INFLUENCING WATER FEATURES

Narrative:

This site is not influenced by water from a wetland or stream.

Wetland description:

System	Subsystem	Class
N/A		

If Riverine Wetland System enter Rosgen Stream Type:
N/A

REPRESENTATIVE SOIL FEATURES

Narrative:

The soils on this site are deep and somewhat well drained to well drained. Surface layers are typically medium to fine textured. Underlying layers may be almost any type of material from coarse to fine textured. Intake rates are moderate to slow and water-holding capacities are moderate to high. The soils are subject to deep gullying; and although naturally subject to frequent overflow, may be found in a drained condition once gullies have formed or certain man-made diversions have been constructed.

Parent Material Kind: Alluvium
Parent Material Origin: Mixed

Surface Texture:

1. Silty clay
2. Clay loam
3. Loam
4. Silty clay loam

Surface Texture Modifier:

1. N/A
2.
3.

Subsurface Texture Group: Sandy clay
Surface Fragments <=3" (% Cover): N/A
Surface Fragments >3" (% Cover): N/A

Subsurface Fragments <=3" (%Volume): 0 to 12
Subsurface Fragments >=3" (%Volume): N/A

	Minimum	**Maximum**
Drainage Class:	Moderately well	Well
Permeability Class:	Impermeable	Moderately rapid
Depth (inches):	>72	>72
Electrical Conductivity (mmhos/cm):	0.00	4.00
Sodium Absorption Ratio:	N/A	N/A
Soil Reaction (1:1 Water):	7.4	9.0
Soil Reaction (0.1M CaCl2):	N/A	N/A
Available Water Capacity (inches):	4	7
Calcium Carbonate Equivalent (percent):	N/A	N/A

PLANT COMMUNITIES

Ecological Dynamics of the Site:

Plant Communities and Transitional Pathways (diagram)

Plant Community Name: Historic Climax Plant Community

Plant Community Sequence Number: 1 **Narrative Label**: HCPC

Plant Community Narrative: Historic Climax Plant Community
This site is strongly dominated by giant sacaton. Alkali sacaton, tobosa, vine-mesquite, scattered shrubs such as fourwing saltbush, Apacheplume, and occasionally yucca on the more medium textured soils, also occur. Forbs and shrubs occur as minor components of the plant community when the site is at its potential.
*Western wheatgrass may be found at certain higher elevations and in the northern portions of the site's range of occurrence.

Canopy Cover:	
Trees	0
Shrubs and half shrubs	4 %
Ground Cover (Aveage Percent of Surface Area).	
Grasses & Forbs – plant density	60
Bare ground	4
Surface gravel	1
Surface cobble and stone	0
Litter (percent)	35
Litter (average depth in cm.)	4

Plant Community Annual Production (by plant type):

Annual Production (lbs/ac)

Plant Type	Low	RV	High
Grass/Grasslike	1,488	2,444	3,400
Forb	140	230	320
Tree/Shrub/Vine	140	230	320
Lichen			
Moss			
Microbiotic Crusts			
Total	1,750	2,875	4,000

Plant Community Composition and Group Annual Production:

Plant Type - Grass/Grasslike

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
1	SPWR2	Giant Sacaton	1438 – 1725	1438 – 1725
2	SPAI PASM PAOB	Alkali Sacaton Western Wheatgrass* Vine-mesquite	288 – 431	288 – 431
3	PLMU3 PLJA	Tobosa Galleta	144 – 288	144 – 288
4	SCBR2 ARIST MURE MURI	Burrograss Threeawn spp. Creeping Muhly Mat Muhly	29 – 144	29 – 144
5	BOBA3 BOCU ERIN	Cane Bluestem Sideoats Grama Plains Lovegrass	29 – 144	29 – 144
6	DAPU7 MUTO2	Fluffgrass Ring Muhly	0 – 86	0 – 86
7	2GRAM	Other Grasses	29 – 86	29 - 86

Plant Type - Forb

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
8	2FA	Annual Forbs	86 – 144	86 – 144
9	2FP	Perennial Forbs	29 – 144	29 - 144

Plant Type – Tree/Shrub/Vine

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
10	FAPA ATCA2 YUCCA PLSE EPTR TICAC	Apacheplume Fourwing Saltbush Yucca spp. Arrowweed Longleaf Ephedra Condalia	86 – 230	86 – 230
11	GUSA2	Broom Snakeweed	29 – 86	29 – 86

Plant Type - Lichen

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Type - Moss

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Type - Microbiotic Crusts

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Growth Curves

Growth Curve ID NM0606

Growth Curve Name: HCPC

Growth Curve Description: Giant sacaton dominated grassland with scattered shrubs and a minor component of forbs.

Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
0	0	5	7	10	15	25	25	8	5	0	0

ECOLOGICAL SITE INTERPRETATIONS

Animal Community:

This ecological site provides habitat which can support a resident animal community characterized by black-tailed jackrabbit, coyote, pronghorn antelope, meadowlark, mockingbird, Scott's oriole, scaled quail, mourning dove, leopard lizard, Couch's spadefoot toad, and Western diamondback rattlesnake.

Where large soaptree yucca and woody shrubs are present, mockingbird, Scott's oriole, and mourning dove nest.

Hydrology Functions:

The runoff curve numbers are determined by field investigations using hydrologic cover conditions and hydrologic soil groups.

Hydrologic Interpretations	
Soil Series	Hydrologic Group
Haverson	B
Redbank	B
Ruidoso	C
San Mateo	B
Sparank	D
Stirk Variant	D

Recreational Uses:

This site offers limited recreation potential for horseback riding, picnicking, nature observation, photography, and hunting for mourning dove, scaled quail, and pronghorn antelope. When favorable spring moisture conditions occur, some wildflowers may be seen.

Wood Products:

This site has no significant value for wood products.

Other Products:

Grazing:

This site is suitable for grazing cattle, sheep, and horses, generally without regard to class of livestock. It is better suited, however, for cows with calves old enough to take a substantial amount of milk during spring and summer when grasses are green.

A decrease in giant sacaton, alkali sacaton, sideoats grama, and cane bluestem and an increase in such plants as tobosa, burrograss, creeping or mat muhly, threeawns, and broom snakeweed characterize site deterioration. Eventually, under prolonged heavy grazing, mesquite may invade. Although site deterioration may be caused by abusive grazing it is more frequently caused on this site by gullying and draining. This condition is, at its extreme, represented by an abundance of bare ground and annuals, coupled with remnant stands of sacaton or tobosa situated so as to receive overflow from side drainages. The site at this stage may not be recoverable using improved grazing management alone.

Other Information:

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month

Similarity Index	Ac/AUM
100 - 76	1.7 – 2.6
75 – 51	2.3 – 3.5
50 – 26	3.3 – 6.5
25 – 0	6.5+

Plant Part	Code	Species Preference	Code
Stems	**S**	**None Selected**	**NS**
Leaves	**L**	**Preferred**	**P**
Flowers	**F**	**Desirable**	**D**
Fruits/Seeds	**F/S**	**Undesirable**	**U**
Entire Plant	**EP**	**Not Consumed**	**NC**
Underground Parts	**UP**	**Emergency**	**E**
		Toxic	**T**

Plant Preference by Animal Kind:

Animal Kind: Livestock
Animal Type: Cattle

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Vine-mesquite	Panicum obtusum	EP	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
Cane Bluestem	Bothriochloa barbinodis	EP	U	U	U	U	U	U	P	P	D	U	U	U
Sideoats Grama	Bouteloua curtipendula	EP	P	P	P	P	P	P	P	P	P	P	P	P
Fourwing Saltbush	Atriplex canescens	EP	P	P	P	P	P	D	D	D	D	D	D	P
Alkali Sacaton	Sporobolus airoides	EP	D	D	D	D	D	P	P	P	U	U	U	D
Giant Sacaton	Sporobolus wrightii	EP	D	D	D	D	D	P	P	P	U	U	U	D
Western Wheatgrass	Pascopyrum smithii	EP	D	D	P	P	P	D	D	D	D	D	D	D

Animal Kind: Wildlife
Animal Type: Antelope

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Croton spp.	Croton spp.	EP	D	D	D	D	D	D	D	D	D	D	D	D
Fourwing Saltbush	Atriplex canescens	EP	D	D	D	D	D	D	D	D	D	D	D	D
Perennial Forbs	Various	EP	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S

SUPPORTING INFORMATION

Associated sites:

Site Name	Site ID	Site Narrative

Similar sites:

Site Name	Site ID	Site Narrative

State Correlation:

This site has been correlated with the following sites: _____

Inventory Data References:

Data Source	# of Records	Sample Period	State	County

Type Locality:

State: **New Mexico**

County: **Grant, Catron, Hidalgo, Sierra, Socorro**

Latitude: _____

Longitude: _____

Township: _____

Range: _____

Section: _____

Is the type locality sensitive? **Yes** ☐ **No** ☐

General Legal Description: _____

Relationship to Other Established Classifications:

Other References:

Data collection for this site was done in conjunction with the progressive soil surveys within the New Mexico and Arizona Plateaus and Mesas 36 Major Land Resource Area of New Mexico. This site has been mapped and correlated with soils in the following soil surveys: Socorro, Sierra, Grant, Catron.

Characteristic Soils Are:	
Ruidoso	San Mateo
Other Soils included are:	
Glenberg	Haverson
Redbank	Sparank
Stirk Variant	

Site Description Approval:

Author	Date	Approval	Date
Don Sylvester	04/25/80	Durwood E. Ball	04/29/80

Site Description Revision:

Author	Date	Approval	Date
Elizabeth Wright	07/05/02	George Chavez	12/17/02